

Date: Fri, 12 Feb 93 08:07:29 PST
From: Info-Hams Mailing List and Newsgroup <info-hams@ucsd.edu>
Errors-To: Info-Hams-Errors@UCSD.Edu
Reply-To: Info-Hams@UCSD.Edu
Precedence: Bulk
Subject: Info-Hams Digest V93 #201
To: Info-Hams

Info-Hams Digest Fri, 12 Feb 93 Volume 93 : Issue 201

Today's Topics:

 another TVI problem
Cancer, Hams , Proof, Danger re RF RADIATION
 Dave in VA .. de W9IP
 DJ580 Mods
 Ground
 Home building PT0s
Is used ham gear overpriced?
 Looking for software
 Magnetic Loop Antennas
 Phase Sequence Filter Quadrature Networks
Sales tax on mail order? (was: Re: Bay area amateur radio stores)
 Ten-Tec OMNI VI
 TV antenna questions
 Why all the [Radio] Bulletins?
 Why all the Bulletins?
 Why so many bulletins? (2 msgs)

Send Replies or notes for publication to: <Info-Hams@UCSD.Edu>
Send subscription requests to: <Info-Hams-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Info-Hams Digest are available
(by FTP only) from UCSD.Edu in directory "mailarchives/info-hams".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: 10 Feb 93 19:22:59 GMT
From: ogicse!uwm.edu!rpi!psinnntp!psinnntp!arrl.org@network.UCSD.EDU
Subject: another TVI problem
To: info-hams@ucsd.edu

In rec.radio.amateur.misc, tatsuya@sofya.math.byu.edu writes:

>My friend got TVI problem. We tried low/high pass filter. It does not
>seems go away. I guess the rig may need some tuning. But Is there any
>other thing that she can do?

The description of the problem is not real specific, so I can only address this in generalities.

An interference problem can be caused by harmonics or other spurious signals from the transmitting station, overload of the TV (or other consumer electronics equipment) or both. It usually takes a bit of investigation and troubleshooting to determine the true cause.

In the case of TVI, your friend has taken the correct approach, starting with a low-pass filter, and trying a high-pass filter on the TV. You don't mention if the TV is hooked up to cable, or what the transmit frequency range is. For example, if the transmit frequency is on the amateur 2-meter band, and the interference is to catv channel 18, then either cable leakage, or leakage in a cable-ready device (TV, VCR, set-top converter) is indicated.

Because the low-pass filter and high-pass filter did not prove effective, I will hazard a guess that the interference is from an HF transmitter to a cable-tv connected set. The first line of defense for a cable-tv installation is NOT the high-pass filter, it is the common-mode choke. The "common-mode" signal is, in essence, the signal picked up on the OUTSIDE of the shield of the coax. (The outside of the coax is a big long-wire antenna.)

One can make a common-mode choke by wrapping about 10-15 turns of the cable on an FT-240-43 ferrite core, and installing it as close as possible to the set-top converter, VCR or TV antenna or cable input. DO NOT use unknown material (junk-box ferrites) to make a common-mode choke -- you have no idea if the characteristics of the material will work.

This is just the tip of the iceberg. I recommend the ARRL "EMI/RFI Package" (free) and our book "Radio Frequency Interference -- How to Find It and Fix It" (not free). An electronic copy of our "EMI/RFI Package is available on our ARRL Information Mail Server, info@arrl.org. Send the following as text to info@arrl.org:

```
help
index
send emi-gen
send emi-source
quit
```

Contact ARRL HQ for information about the book. If you have any

EMI questions after you have read our free material, or the book,
contact me here at HQ.

73, Good luck, Ed

Ed Hare, KA1CV
American Radio Relay League
225 Main St.
Newington, CT 06111
(203) 666-1541 - voice
ARRL Laboratory Supervisor
RFI, xmtr and rcvr testing

ehare@arrl.org

You will never put the puzzle together
if you keep putting all the pieces
back in the box.

Date: 10 Feb 93 20:32:35 GMT
From: saimiri.primate.wisc.edu!usenet.coe.montana.edu!logicse!hp-cv!hp-pcd!
news1.boi.hp.com!cupnews0.cup.hp.com!hpscit.sc.hp.com!hplextra!hpl-opus!hpnmdla!
alanb@ames.arpa
Subject: Cancer, Hams , Proof, Danger re RF RADIATION
To: info-hams@ucsd.edu

In rec.radio.amateur.misc, wagner@mala.bc.ca writes:

>Don't know about cancer, as I am still here, but I have got a couple of good
>RF burns. Last one was when someone keyed the commercial SSb transmitter I was
>tuning. Had my hand in the antenna turner at the site. The first hint I had
>was a few hours later when my hand started to swell. They are right, microwave
>ovens start cooking an inch or so below the surface. It was pretty painful!!

Yeah, even low frequency RF can cause tissue heating. Medical diathermy
machines do exactly that and operate in the 26 MHz range, as I recall.
But I have always heard the term "RF burns" to refer to a burn caused
not by heating, but by rf current flow. Similar to an electric shock,
except that high-frequency currents flow on the surface of the tissue
(causing a burn) instead of down deep where they can affect the
nervous system (shock).

RF burns are nasty -- they hurt like the dickens and take forever to
heal. At least they are well-cauterized! :=)

AL N1AL

Date: 12 Feb 93 12:05:55 GMT
From: news-mail-gateway@ucsd.edu
Subject: Dave in VA .. de W9IP
To: info-hams@ucsd.edu

Dave -
I mistakenly discarded your message before copying your
address. Please write back.
Michael Owen W9IP
MROWEN@STLAWU

Date: 12 Feb 93 10:41:55 GMT
From: ogicse!emory!rsiatl!ke4zv!gary@network.UCSD.EDU
Subject: DJ580 Mods
To: info-hams@ucsd.edu

In article <C29n0r.AL3@csn.org> erik@teal.csn.org (Erik Mugele) writes:
>This brings up another question. If I am licensed to use a business band
>radio for my job and I have an amateur radio modified to transmit out
>of band, is it leagle for me to use the amateur radio on the business
>frequency since I am licensed there?

No, absolutely not. Commerical licensees may only use radios Type Accepted
for the service for which they are licensed. You *can* use a land mobile
radio in the amateur service of course.

Gary

--
Gary Coffman KE4ZV | You make it, | gatech!wa4mei!ke4zv!gary
Destructive Testing Systems | we break it. | uunet!rsiatl!ke4zv!gary
534 Shannon Way | Guaranteed! | emory!kd4nc!ke4zv!gary
Lawrenceville, GA 30244 | |

Date: 12 Feb 93 15:39:28 GMT
From: news-mail-gateway@ucsd.edu
Subject: Ground
To: info-hams@ucsd.edu

Okay net folks...I have a few questions about grounds.

Due to circumstances out of my control my HF Rig is located
on the second floor of a two story townhouse. I could drive
an 8ft. ground rod right next to the house, but I would have a

wire run of approximately 25-30 ft. from the rig to the ground rod.

- Is this too long of a run???
- If it is too long of a run what other grounding options would you suggest?

thanks for the info - Warren (KD4???)

Warren E. Lewis
Graphics Division
SAS Institute Inc.
Cary, NC

saswel@unx.sas.com
(919) 677-8001 x6542
PP-ASEL
DOD#0021

Date: 10 Feb 93 20:35:55 GMT
From: saimiri.primate.wisc.edu!usenet.coe.montana.edu!ogicse!hp-cv!hp-pcd!
news1.boi.hp.com!cupnews0.cup.hp.com!hpscit.sc.hp.com!hplextra!hpl-opus!hpnmdla!
alanb@ames.arpa
Subject: Home building PT0s
To: info-hams@ucsd.edu

In rec.radio.amateur.misc, chuck@eng.umd.edu (Chuck Harris - WA3UQV) writes:

>Probably the simplest scheme for a linear PT0 is to use some kind of screw
>driven platform to move your core, and then wind the coil with a non-linear
>spacing between the turns.

>If you want your PT0 to cover a large frequency range (1MHz +) You will
>probably need to come up with some fancy nonlinear way of driving the core
>into the coil, in addition to winding a nonlinear coil.

The famous Collins and Drake PT0s used a non-linear coil winding and linear screw mechanism. The Drake covered about a 10% frequency range (5-5.5 MHz). Some of the Collins units covered a 2:1 range. (I have one in the junkbox that goes 1.5-3 MHz.)

AL N1AL

Date: 12 Feb 93 00:54:42 GMT
From: ogicse!uwm.edu!cs.utexas.edu!not-for-mail@network.UCSD.EDU
Subject: Is used ham gear overpriced?
To: info-hams@ucsd.edu

Howdy.....

To quote a person I talked to about how much to sell my pinball machine for, "It's worth whatever somebody will buy it from you for." An item is worth whatever somebody is willing to pay to get it.....I mean, I guess this is "fair market price" (?) or something.....

Evidently, this is what the market will bear at this time, and if I didn't know the person, I don't think I'd buy used durable goods from him/her.....Get a new radio, eh? ;-)

Good luck.....

73!

T. M. K. -- kj5gu

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Internet:  phantom@pro-haven.cts.com          KJ5GU/AE
UUCP:      crash!pro-haven!phantom           Try 28.440MHz.....
          For the latest breaking Aggie Jokes, Dial 1-800-AGGIE-IQ.....
          ".....and for the first time in twenty years in Waxahachie, Texas.....
          .....it rained!"   The Rocky and Bullwinkle Show
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Date: 12 Feb 93 10:33:08 GMT
From: news.cerf.net!pagesat!olivea!sgigate!sgiblab!sdd.hp.com!nigel.msen.com!
math.fu-berlin.de!ira.uka.de!news.belwue.de!news.uni-ulm.de!news@network.UCSD.EDU
Subject: Looking for software
To: info-hams@ucsd.edu

I am looking for software, which I can use for the decoding of dates in radio-communications of amateurs:

packet-radio
pactor
amtor
rtty
morse
fax
sstv

I am also looking for software for the controlling of a NRD 525 receiver by a PC.

Please email to s_krusemar@rzmain.rz.uni-ulm.de

Ciao

Michael

Date: 12 Feb 93 15:16:37 GMT
From: ogicse!uwm.edu!cs.utexas.edu!sdd.hp.com!col.hp.com!fc.hp.com!
jayk@network.UCSD.EDU
Subject: Magnetic Loop Antennas
To: info-hams@ucsd.edu

In volume two of the 'ARRL(?) Antenna Compendium' there is a article titled 'Magnetic Radiators - Low Profile Verticals for HF'. It is written by Russell E. Prack K5RP and is on pages 39,40 and 41. I don't have the book but have a copy of the article. It looks like a very interesting antenna. I'm told it models well on some of the antenna software in use today. If I can ever find some cheap telephone poles around here I hope to try one on 80 or 160 meters.

The article also gives several references going as far back as the book 'Antennas' by Krauss <sp? W8JK in 1950.

73, Jay K0GU jayk@fc.hp.com

Date: 10 Feb 93 21:12:58 GMT
From: saimiri.primite.wisc.edu!usenet.coe.montana.edu!ogicse!hp-cv!hp-pcd!
news1.boi.hp.com!cupnews0.cup.hp.com!hpscit.sc.hp.com!hplextra!hpl-opus!hpnmdla!
alanb@ames.arpa
Subject: Phase Sequence Filter Quadrature Networks
To: info-hams@ucsd.edu

In rec.radio.amateur.misc, rander@netcom.com (Raymond Anderson) writes:

>This posting is an inquiry to see if anyone has had any experience
>with "phase sequence filters" to produce quadrature audio signals.

...

>If anyone can give an explanation of the design methodology for
>calculating the component values of a phase sequence filter to meet a
>given bandwidth and deviation from quadrature criteria I would
>sure appreciate hearing from you.

The straightforward way is with a series of all-pass networks.
A series-R, shunt-C network has a Laplace transform of $1/(1+RCS)$,
and a series-C, shunt-R is $RCS/(1+RCS)$. If you combine the two
out of phase you get: $(1-RCS)/(1+RCS)$ which is a network with
flat amplitude and a phase that goes from +180 degrees at low
frequencies to -180 degrees at high frequencies.

By stringing 3 or 4 of these together, you can get a pretty linear phase versus frequency plot. Then build a second string offset slightly in frequency so that the phase difference between the two strings is a fairly constant 90 degrees.

The more sections per decade, the flatter the phase response. If you have access to Spice, I think you could use a heuristic design technique. (Play with it until it works :=)

AL N1AL

Date: 10 Feb 93 20:39:25 GMT
From: saimiri.primate.wisc.edu!usenet.coe.montana.edu!logicse!hp-cv!hp-pcd!news1.boi.hp.com!cupnews0.cup.hp.com!hpscit.sc.hp.com!hplextra!hpl-opus!hpnmdla!alanb@ames.arpa
Subject: Sales tax on mail order? (was: Re: Bay area amateur radio stores)
To: info-hams@ucsd.edu

In rec.radio.amateur.misc, jfh@netcom.com (Jack Hamilton) writes:

>California residents
>who buy via mail order are required by California to pay a use tax
>equivalent to the sales tax. Out of state companies are *not* required to
>collect those taxes unless they do business (generally, have an office or
>own property) in California.

>Since there's no enforcement mechanism, use taxes are not, in practice,
>ever paid.

You darn well better pay them if you ever want to be US Attorney General!

:=)

AL N1AL

Date: Thu, 11 Feb 1993 14:59:20 GMT
From: pacbell.com!att-out!cbfsb!cbnewsg.cb.att.com!wstrahl@ames.arpa
Subject: Ten-Tec OMNI VI
To: info-hams@ucsd.edu

a

I've now had my new OMNI VI for a couple weeks and just wanted to pass the word to the Usenet community that I think Ten-Tec definitely did their homework and spent adequate lab time before putting this rig on

the market. I don't have all the equipment to verify all the technical specifications (the good QST review seems to verify everything) but I can definitely say this is a much nicer rig than the OMNI V ended up being (even after all the mods). The basic circuit layout is rather similar to the V but with part values tweaked all over the place. User interface super..AGC superb..QSK outstanding..DSP clever.

I'm primarily a CW DX'er and halfway serious contester and I really think anyone with similar interests should seriously consider this rig to help the U.S. economy. Especially considering Ten-Tec's outstanding service policy (if you're not averse to opening things up and swapping out boards) I give this thing a three thumbs up rating.

Wayne Strahl - W9II wstrahl@cbnewsg.att.com

Date: 12 Feb 93 06:50:00 GMT
From: ogicse!uwm.edu!cs.utexas.edu!sdd.hp.com!crash!slic!mikey@network.UCSD.EDU
Subject: TV antenna questions
To: info-hams@ucsd.edu

jack.decker@f8.n154.z1.fidonet.org (Jack Decker) writes:

> * Crossposted to rec.radio.amateur.misc, rec.video.cable-tv,
> rec.video.satellite, sci.electronics.

Follow-up to r.r.a.m.

> The 75 ohm cable that is in use now has a matching transformer up by the
> antenna. How much loss do those introduce?

I suspect your balun. Is it spec'd for UHF. Many are not, especially the cable TV cheapos. Get a hi-quality unit rated to 900 Mhz. 300 Twin-lead...NOT!!!

Do you have a UHF/VHF splitter at the TV end? Again hi-quality.

I've had excellent service with RG-59 and 1/2" 75 ohm hardline. I have my TV antenna atop an 80 foot pole, 12 db low-noise amp at the antenna, 300 feet of 1/2" hardline to house, then a 3db per port, 4 port distribution amplifier to feed the house. And Baluns at both ends of course.

I'll take the easy road and let other folks answer your others questions...

--

Mike, San Diego, CA USA Public Key Available
mikey@slic.cts.com GENie: SLIC Ham: WB6WUI

Date: 12 Feb 93 05:59:37 GMT
From: ogicse!emory!sol.ctr.columbia.edu!news.unomaha.edu!cwis!
pschleck@network.UCSD.EDU
Subject: Why all the [Radio] Bulletins?
To: info-hams@ucsd.edu

On rec.radio.amateur.misc, emd@ham.almanac.bc.ca writes:

>pschleck@cwis.unomaha.edu (Paul W Schleck KD3FU) writes:

>> On Usenet, cross-posting is a good idea, because it maintains visibility
>> for the posts in the natural, home newsgroup. Also, good newsreaders
>> will only present an article once, regardless of how many newsgroups
>> it's posted to.

>>

>Paul, not everyone has a newsreader that only keeps one copy of an
>article. Mine doesn't, for example. Every newsgroup message that is
>duplicated takes up extra space on my hard drive. Furthermore, I DON'T
>appreciate getting the same darn post in more than one newsgroup. And I
>DON'T like all the time I waste wading through multiple postings of the
>SAME message.

>How about just posting the bulletins to rec.radio.info, and only
>cross-posting a short one-page summary to the other groups? That way,
>you'll still get the exposure, and we'll reduce the wasted space on
>hundreds of hard drives.

Using the powerful features of the Usenet message transport mechanism is more problematic on this newsgroup, admittedly, as it seems to have an unusually high number of mailing list users and BBS sites which use non-standard news servers. In the case of the mailing list, the previously-suggested filter should work. Non-conforming Usenet sites (that don't use C-News or INN) should strongly consider upgrading their software, or choose not to carry rec.radio.info. The new newsgroup was designed to be most beneficial to the overwhelming majority of Usenet sites with good newsreaders. At the very least, it should be non-detrimental to the other sites (you're not missing information that can't already find elsewhere). And I'm sure even you, as the administrator of a BBS, can understand the pitfalls of constantly trying to encompass the lowest-common denominator for any and all change. (It punishes those who have taken steps to upgrade their systems, and at the very least, removes the incentives for non-conforming sites to get on board).

If there was one overwhelming sentiment among the readers of the rec.radio.* newsgroups, it was that an "exclusive" newsgroup that fractured the heirarchy and "forced" bulletins off to their own newsgroup was not only undesirable, but probably unenforceable. It is also intuitive to expect Frequently-Asked Questions about Amateur Radio to appear in rec.radio.amateur.misc, and shortwave schedules in rec.radio.shortwave. Not every site is going to subscribe to rec.radio.info, nor will every reader know that it exists and that's where to find information. The only practical solution is cross-posting, provide two ways of viewing FAQ's, hope that the majority of news sites can handle this transparently, seek to alleviate problems on the mailing list through filtering, and strongly encourage non-traditional Usenet sites to upgrade their software (The source-code to C-News is free, and will compile on a suprisingly large number of systems). As a last resort, you can simply choose not to carry or read rec.radio.info. The solutions aren't simple, and won't please everyone, but represent the best compromise and overall benefit to the net.

Hope my comments on this issue (as well as the technical details of the Arbitron Usenet readership statistics) are useful to you. Hope that my clarification and myth-debunking is useful to the rest of the net as well (Should we go to news.groups to discuss this further? I have a feeling I'm using up all my favors with this administrivia. :-)

73, Paul W. Schleck, KD3FU

pschleck@unomaha.edu

Date: Wed, 10 Feb 1993 12:40:17 GMT
From: pacbell.com!sgiblab!spool.mu.edu!nigel.msen.com!hela.iti.org!cs.widener.edu!
batman!dxis!k2ph@network.UCSD.EDU
Subject: Why all the Bulletins?
To: info-hams@ucsd.edu

Date: 12 Feb 93 12:40:27 GMT
From: news-mail-gateway@ucsd.edu
Subject: Why so many bulletins?
To: info-hams@ucsd.edu

>Paul, not everyone has a newsreader that only keeps one copy of an
>article. Mine doesn't, for example. Every newsgroup message that is

Date: (null)
From: (null)
LOTS O' STUFF DELETED

Seems to me that rec.radio.amateur.misc IS the proper place for
bulletins having to do with amateur radio. Keep them coming!

--

Bob Schreibmaier K2PH	UUCP: att!dxis!k2ph	Free
(a.k.a. "The QRPper")	INTERNET: k2ph@dxis.att.com	the
Kresgeville, PA	ICBM: 40o55'N 75o30'W	Intel 386

Date: 12 Feb 1993 15:30:29 GMT
From: ucsd.edu!brian@network.UCSD.EDU
To: info-hams@ucsd.edu

References <9302081738.AA061e@catipult.anatcp.rockwell.com>,
<1993Feb10.124017.7080@dxis.att.com>, <pschleck.729451323@cwis>
Subject : Re: Why all the Bulletins?

pschleck@cwis.unomaha.edu (Paul W Schleck KD3FU) writes:
>So, if you are a reader of Info-Hams, or Radio-Info, and think that this
>approach is a good idea, drop Brian a line at brian@ucsd.edu to remind
>him and encourage its implementation.

Or better yet, instead of contributing another 100+ messages to my
mailbox (out of the 300+ I already get every day), why don't you figure
out a way to send me your spare waking hours so that I'll have time to
do it.

It'll get done, but it's real low priority. Don't hold your breath.
- Brian

End of Info-Hams Digest V93 #201
